CHROMOSOME COUNTS OF MISSOURI ASTERACEAE AND POACEAE

Few native Missouri plants are chromosomally known from Missouri populations. The list of chromosome counts for composites and grasses in Table 1 is a small contribution in this area. The counts were made from standard anther squashes stained in propionic-carmine and dissected from buds fixed in Carnoy's or Newcomer's fixative. Except for *Paspalum laeve,* meiosis was normal in all collections, and the observed numbers agree with previously reported numbers as summarized in Federov (1969), Moore (1973, 1974, 1975), and Goldblatt (1981, 1984, 1985). Vouchers are deposited in MO and KUH.

The chromosome number for *Paspalum laeve* has previously been reported as $2n = 40$ (Brown, 1948), $2n = 60$ (Burton, 1942, as *P. longipilum* Nash), and $n = 40$ (Banks, 1964). Our count of $n = 29$ apparently represents an aneuploid reduction from the hexaploid level of $n = 30$. Meiosis and pairing were normal. The second population sampled had the heptaploid number, $n = 35$, and the chromosomes were almost completely asynaptic in early meiosis. No more than five bivalents were ever observed at diakinesis or metaphase I (Fig. 1). When chromosomes were paired, the association was very loose. Structures that we believe may be micronucleoli were present in variable numbers at diakinesis (Fig. 1A). We suspect, based on a similar pattern of asynapsis in the tetraploid apomictic cytotype of *P. conjugatum* Berg. (Fang & Li, 1966; Mehra, 1982), that the plant may have been apomictic. Since only one plant was examined, we do not know whether this condition was isolated or widespread in the population. The species is morphologically variable and further cytotaxonomic studies throughout its range may be helpful in relating some of this variation to ploidy levels.

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Table 1. Chromosome numbers of Missouri Asteraceae and Poaceae.

Taxon	*n*	Voucher[a]
Asteraceae		
Erigeron strigosus Muhlenb.	18	*Vahidy & Davidse 21*
Eupatorium coelestinum L. f.	10	*Vahidy & Davidse 20*
Lactuca floridana (L.) Gaertner	17	*Vahidy & Davidse 12*
Rudbeckia laciniata L.	27	*Davidse & Vahidy 30845*
Rudbeckia missouriensis Engelm.	19	*Davidse & Vahidy 30838*
Solidago nemoralis Aiton	27	*Vahidy & Davidse 15*
Solidago ulmifolia Muhlenb.	9	*Davidse & Vahidy 30835*
Poaceae		
Leersia virginica Willd.	ca. 24	*Davidse & Vahidy 30840*
Panicum capillare L.	9	*Vahidy & Davidse 17*
Paspalum fluitans (Elliott) Kunth	10	*Davidse & Vahidy 30854*
Paspalum laeve Michaux var. *laeve*	35	*Vahidy & Davidse 1*
Paspalum laeve Michaux var. *pilosum* Scribner	29	St. Louis, Tower Grove Park, *Davidse & Vahidy 30846*
Paspalum pubiflorum Rupr. var. *glabrum* Vasey	30	*Vahidy & Davidse 24*
Paspalum setaceum Michaux var. *muhlenbergii* (Nash) D. Banks	10	*Vahidy & Davidse 14*
Sorghastrum nutans (L.) Nash	20	*Vahidy & Davidse 16*

[a] Collected at Shaw Arboretum, Franklin County, Missouri, unless indicated otherwise.

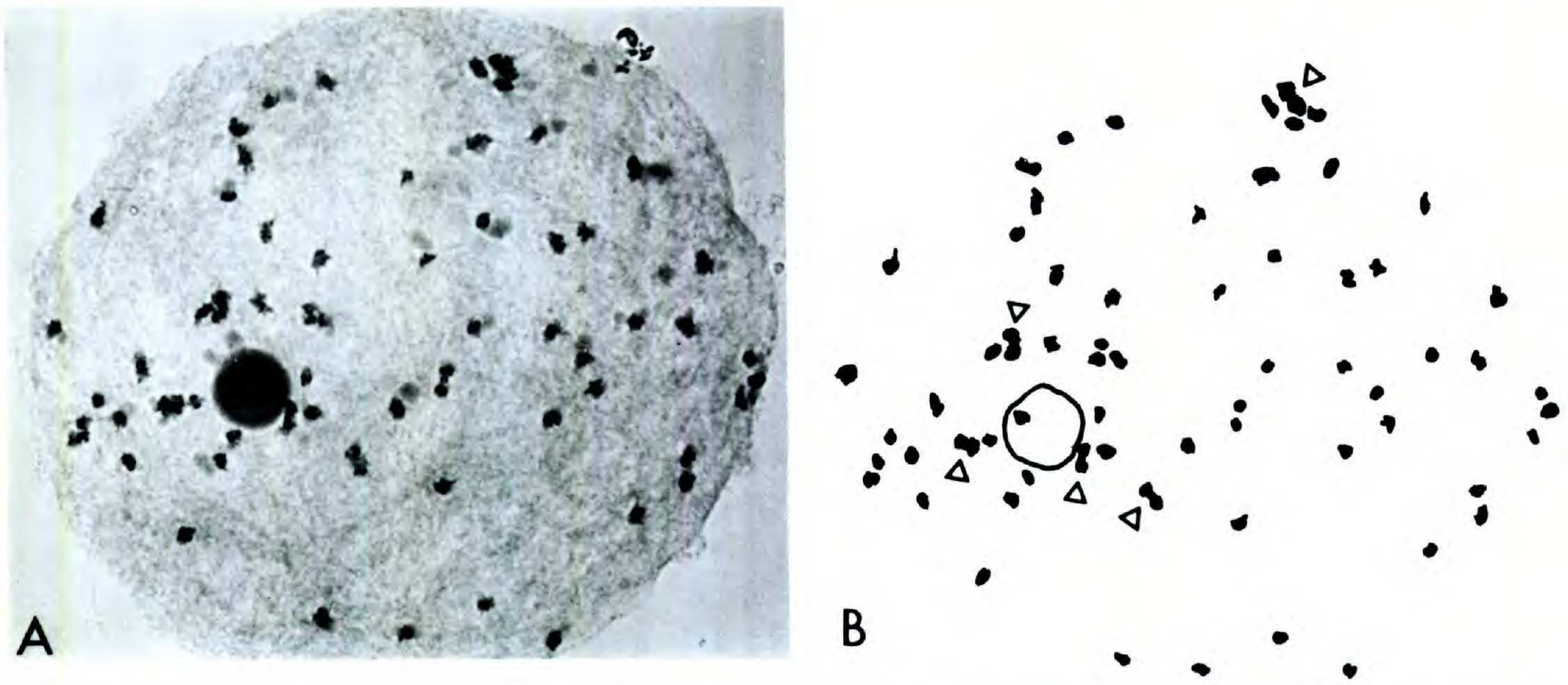

FIGURE 1. Diakinesis in *Paspalum laeve* var. *laeve*, $n = 35$.—A. Photomicrograph showing nearly complete asynapsis.—B. Camera lucida drawing of A with 5_{II} (marked) + 60_{I}.

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